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THESIS

PROBLEMS ASSOCIATED WITH THE IMPLEMENTATION OF MANAGEMENT CONTROL SYSTEMS

by

James Maxson Bell

December 1982

Thesis Co-Advisor: K.J. Euske
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Problems Associated with the Implementation of Management Control Systems

by

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Submitted in partial fulfillment of the
requirements for the degree of

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December 1982

ABSTRACT

The objective of the study is to determine if the Navy is following sound implementation procedures when a new system is introduced into the organization. Case studies are employed to determine what problems occur in a specific implementation process and whether or not the problems which did appear could have been avoided by an improved implementation process. This objective is accomplished through a comparison of theoretical models of change and implementation procedures found in accounting and related literature to the actual implementation procedures employed by the Navy in the case studies. The conclusion of the thesis, although the sample size was limited, is that the Navy does have a sound process for implementing change in its management control systems and that the implementation process is used.

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I. INTRODUCTION

A. RESEARCH QUESTION

The Navy has requested for FY83 a $71 billion budget for Fiscal Year 1983. Within this budget request the largest single appropriation is for Operations and Maintenance of the Navy at $19 billion. According to the Navy Accounting and Finance Center (NAFC), there are over 7000 Naval activities for which financial accounting is required. Additionally, the Navy has 43 major accounting systems, of which 33 are approved by the General Accounting Office (GAO) and the Office of Management and Budget (OMB). These accounting systems are part of the broader management control system which is designed to assure that resources are acquired and used efficiently and effectively. Implementation or changes to these systems can affect the efficient and effective use of the Navy's resources.

The purpose of this thesis is to attempt to answer two questions concerning the implementation of management control systems within the Navy. The questions are:

1. Does the Navy have a theoretically sound process for implementing change in its management control systems?
2. Is the implementation process used?

a) If the implementation process is not used, why?

b) If the implementation process is used, how is it used?

B. OBJECTIVE OF THE STUDY

The objective of the study is to determine if the Navy is following sound implementation procedures when a new system is introduced into the organization. Case studies are employed to determine what problems occur in a specific implementation process and whether or not the problems which did appear could have been avoided by an improved implementation process. This objective is accomplished through a comparision of a theoretical model of change and implementation procedures found in accounting and related literature to the actual implementation procedures employed by the Navy for the case studies.

C. RESEARCH METHOD

Information gathering for this thesis included library research, phone conversations with personnel from the Navy Accounting and Finance Center (NAFC), the Office of the Navy Comptroller (NAVCOMPT), the Fleet Material Support Office (FMSO), the Naval Supply Center (NSC) San Diego, and personal interviews with personnel from the Naval

Postgraduate School (NPS) Comptroller and Administrative Sciences Departments.

D. THESIS ORGANIZATION

Chapter II provides a background in the subjects of management control and implementation. This chapter reviews the management control and system implementation literature. In Chapter III the author examines two models of organizational change. In preparation for three case studies of implementation, in Chapter IV the author reviews the history of the Integrated Disbursing and Accounting Financial Management System (IDAFMS) adopted by the Navy; a change in the guidance with regard to expense/investment criteria which affect the employment of Navy appropriations; and the implementation of selected standardized and consolidated financial documents. In Chapter V, the case studies are used to examine the implementation of a specfic portion of the Integration of Disbursing and Accounting (IDA) as it was implemented at the Naval Postgraduate School; the change in the expense/investment criterion; and the implementation of the changed standard documents. The implementation procedures employed are compared to the theoretical implementation procedures discussed in Chapter

II. Chapter VI provides conclusions and recommendations of specific Navy management control system implementation processes based on case studies.

II. MANAGEMENT CONTROL AND IMPLEMENTATION

In order to review the Navy's method of implementation of management control systems, it is necessary to have an understanding of management control and implementation of management control systems. This discussion will provide information, first to understand the general makeup of a management control system, how the parts are related, and second, to identify key steps and relationships necessary for successful implementation. The intention is for this chapter is to provide an overview of management control systems. Additional readings are suggested for readers who desire to investigate the material in greater detail.

The management control section of this chapter includes a definition and general discussion of accounting and the formal management control system and concludes with a discussion of the management control process. The second section of this chapter discusses implementation and provides a discussion of the problems associated with implementation, definition of implementation, an example of implementation models, and concludes with a discussion of how to avoid conflict with the implementation process.

A. MANAGEMENT CONTROL

Management control is defined as the process by which management assures that an organization carries out its strategies effectively and efficiently [Ref. 1:pg. 3]. Management control is part of the larger planning and control process which includes strategic planning and operational control. Strategic planning involves the determination of the broad goals of the organization, as well as the procedures for obtaining the goals. Strategic planning is a predictive process dealing with the external influences on an organization. The purpose of the process is to determine policies which will enable the organization to achieve its goals. Operational control, on the other hand, attempts to assure that the tasks of the organization are carried out as efficiently and effectively as possible. Operational control is concerned with the day to day operations of the organization, with specific situations or organizational tasks [Ref. 2:pg. 401-415]. Both strategic planning and operational control are necessary for an organization. This thesis is concerned with management control.

Cammann and Nadler [Ref. 3:pg. 65-66] have studied this area and raise the question as to why there should be management control systems. Many organizations tend to spend large amounts of money, time, and effort on control systems, only to find that their organizational effectiveness sometimes decreases. They contend the decrease in effectiveness occurs because managers tend to want to modify the systems. This occurs because most of the control systems used are essentially performance measurement systems (i.e. budgetary, management information, and financial accounting) and the managers attempt to improve the technical aspects of the system. Cammann and Nadler argue that managers should be trained and devote their time to use of these systems, instead of spending an inordinate amount of time trying to improve the technical aspects of the systems.

1. Accounting Systems

The management control system is broken into two types of control systems. First, there is administrative control which deals with the plans of an organization, and its procedures and records which are associated with financial transactions. Secondly, there is accounting

control, which places its emphasis on safeguarding assets, and the reliability of financial records.

Herbert [Ref. 4:pg. 123] argues that a good system of management control emphasizes internal control. The management control system should include a statement and plan for accomplishing objectives, policies and practices for departments and entities, and lastly, an effective system of review at all levels.

Through the use of an accounting system, monitoring of performance can be accomplished and a determination made to assure that actual performance is in accordance with the organizational goals and objectives. The accounting system provides historical information which is operational in nature with regard to cost. The management control system then uses this information as a basis for estimations of what could and should happen in the future. This information is then used as an input to strategic planning [Ref. 1:pg. 10].

Additionally, accounting data and its interpretation are useful for evaluating managerial effectiveness. This relates directly to the definition of management control, which emphasises carrying out strategies "efficiently and effectively."

This section has provided a brief description of the relationship of accounting to management control. Appendix A provides a more indepth look at accounting, including discussions on both the Federal and Navy systems. The next sections are an attempt to show the dynamic nature of the management control system. Included are definitions of key steps in the process and a description of the connection between independent variables and control tools.

2. The Formal Management Control System

Anthony and Herzlinger note that the management control process takes place in an organization which "already exists, has goals, and has decided on broad strategies for achieving these goals." [Ref. 1:pg. 14]. The organization has both an informal and a formal structure.

The informal structure is primarily comprised of individuals and small groups, with their own informal goals and objectives [Ref. 1:pg. 14]. The individuals and small groups may or may not be aware of the broader goals of the formal structure.

Contrasting with the informal structure is the formal structure which has the overall mission objectives, a

structured functional hierarchy, and a formal communication network. The management control system is designed for this formal organization. The steps in such a formal management control system are the following:

Programming. Within the framework of programming decisions are made regarding major programs, goals and strategies of the organization. The Programming step adjusts the broad goals and strategies.

Budgeting. Within the framework of budgeting a monetary plan is developed for a specific timeframe and responsibility is assigned for usage of organizational resources. The budget specifically addresses organizational objectives and is a reference for the monitoring of financial activity.

Operating and Measurement. Within the framework of operating and measurement, resource consumption and organizational outputs are noted. This helps assure that the organization does not exceed its normal budget.

Reporting and Analysis. Within this framework accounting and other information is summarized, analyzed, and reported. Comparisons are made of planned versus actual inputs and outputs. [Ref. 1:pg. 14-17]

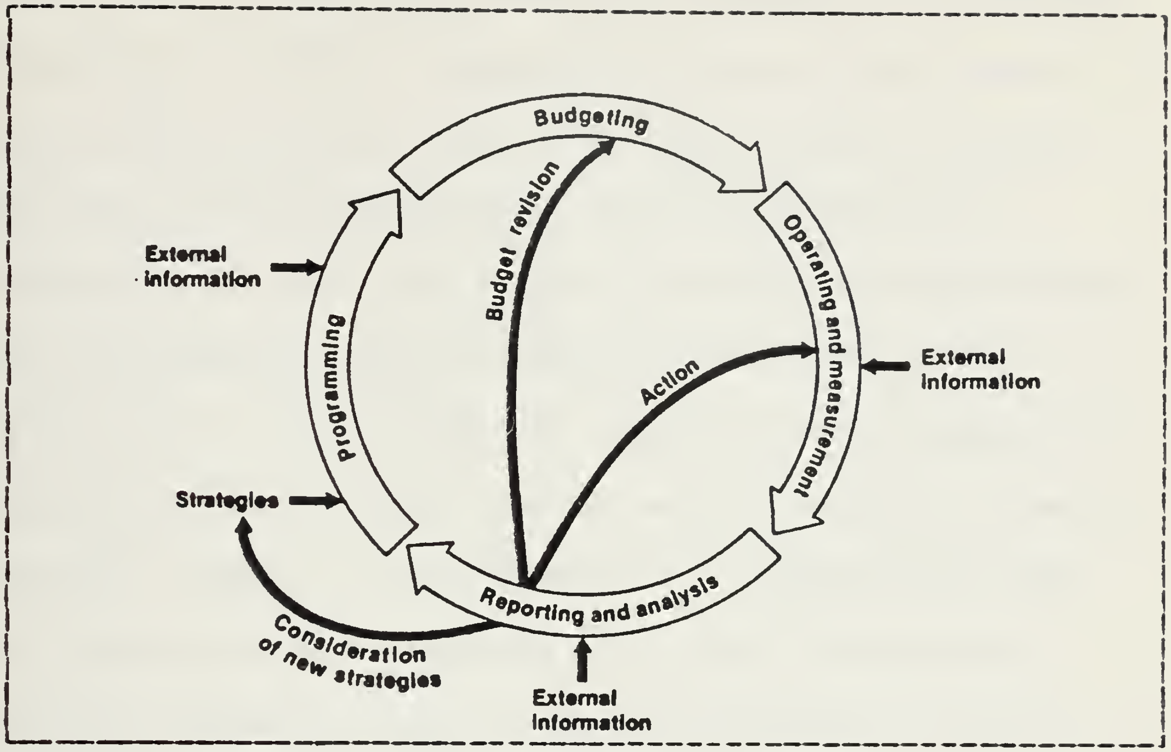


Figure 2.1 Phases of Management Control.

Figure 2.1 shows the relationship of the steps of the management control system. Each step recurs in a regular cycle, and is influenced by external, relevant information on a continuing, systematic basis.

3. Design and Implementation Considerations

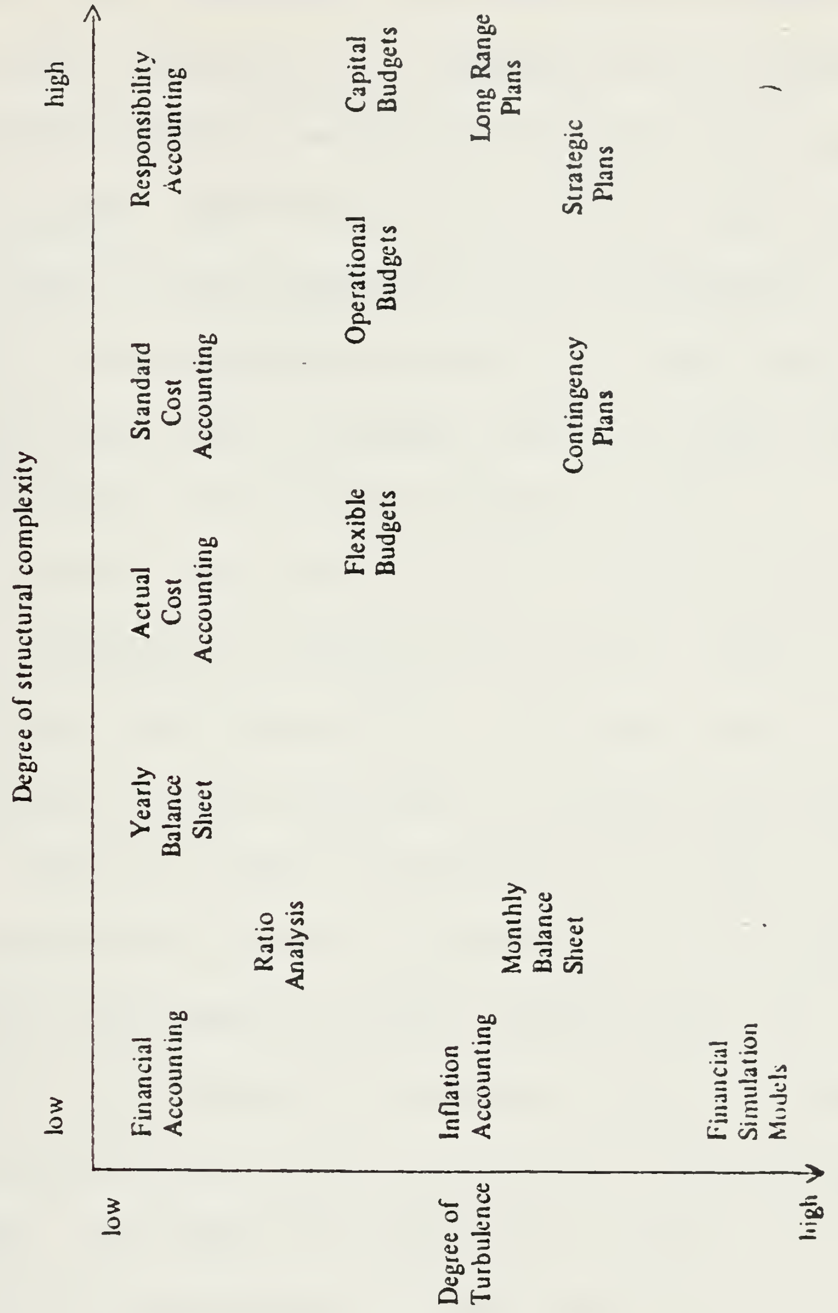
Amigoni [Ref. 5:pg. 279-291] discusses designing and implementing management control systems. The discussion highlights three items. First, there must be a definition of the characteristics of the organization and its

environment which actually influence the management control system. One of the characteristics discussed is structural complexity. Structural complexity relates to the number of responsibility centers within the organization as well as the overall size (divisions) of the organization and information demands. For example, consider the case of the lone entrepreneur, who in a sense is the entire organization. The entrepreneur makes his own decisions and requires only information that he sees as relevant to make a decision. This can be contrasted to an organization with many individuals and sub-units with their own goals and motivation which is likely to have demands for more and different information. The individual entrepreneur represents a single point of contact or receptor. The larger organization, however, has multiple contact points or receptors. Differences in the structural complexity affect how the organization relates to its environment. It can be said that the entrepreneur organization has lower structural complexity than the organization with many individuals and subunits. A prime concern when implementing management control systems is the relationship between the environment and the organization. When developing a management control

system, the organization must be aware of the needs of the environment. A concern for managers is the signal received from the environment and how to react to the signal.

Amigoni's second point is the identification of key features of a management control system which will be monitored. For instance, he argues that there are eight distinctive features which can describe a management control system. One example, quickness, is the measure of how much time elapses between the occurence of an environmental event and when a manager reacts. A second example is the degree of detail of a control system. The degree of detail is primarily concerned with the number of aggregations in which raw financial data is collected and classified. Amigoni's discussion of features to be monitored indicates that a major step in the design of the management control system is such an identification.

Lastly, Amigoni indicated there should be a relationship between the variables of the organization, key features of the management control system, and control tools. There are many combinations of independent variables of the organizaton (e.g. size, structure, information needs) distinctive features (e.g. degree of detail and quickness),



[Ref. 5:pg. 290]

Figure 2.2 Independent Variables and Control Tools.

and control tools (e.g. financial accounting, ratio analysis, cost accounting, and operational budget). The independent variables of an organization can influence both the key features of a management control system and the control tools. Additionally, the control tools can be used to influence the key features of the organization. An example is cost accounting, which may impact the relevance of a particular cost if direct costs are shown, and formal responsibility, if variance analysis is done.

Amigoni uses Figure 2.2 to indicate the connection between independent variables and control tools in an organization [Ref. 5:pg. 291]. He argues that in the relationship between independent variables and control tools, there is a trade off between which tools are used and the corresponding degree of turbulence in the organzation. In stable environments certain controls work well, but falter as the turbulence increases. With an increase of complexity, control tools can be added and still function as designed. An example of interpreting Figure 2.2 is in examining an organization of low complexity (i.e. an entrepreneur) and a low degree of turbulence (i.e. environmental stability). All that may be required to make

management decisions is the use of financial statements. If an organization has both high complexity and turbulence, numerous control tools may be required including a multitude of accounting reports, models, and plans.

B. IMPLEMENTATION

The following section defines implementation, reviews some general problems that can occur during implementation, describes selected implementation models, and concludes with a review of methods to avoid conflict during the implementation process.

1. Implementation Defined

Schultz and Slevin [Ref. 6:pg. 2] have several descriptions of implementation. First, in simple terms, it is "best described in terms of organizational change, in particular, in terms of changes in decision making by managers." Schultz and Slevin credit Randall L. Schultz (1975) for noting that "since not all changes in decision making are necessarily good, successful implementation would refer not only to changed decision making but to improved decision making." They emphasize that there must be organizational validity for some thing to be implemented. Compatibility with existing organizational practices and

user needs is essential. They conclude their discussion by saying that from a behavioral perspective, the successful development and use of an implementation model or technique results in "a positive change in organizational effectiveness." [Ref. 6:pg. 4]

Ginzberg [Ref. 7:pg. 85-87] says that implementation is "a process of organizational change," and provides "a specific, tangible output, a product." In order for implementation to occur, the user must believe that there has been change and that his goals and objectives have been met. Implementation is a process which may cover a lengthy time period, possibly, 2-3 years from the time the decision is made to proceed with system development and the actual date of using the new system [Ref. 1:pg. 541].

There are at least two views of the implementation process, from the management scientist and the user. The management scientist sees implementation as design through the time that output is received from a system, while the user does not recognize an implementation process as being complete until the implemented system is functional [Ref. 7:pg. 87]. Considering the role of both parties, it is not evident that the user is actually involved until

training begins prior to the operation of the system. To summarize the process Ginzberg defines implementation as "beginning with the first thought of implementing the system and not ending until the user is satisfied that he is in control of the system or has abandoned the project." [Ref. 7:pg. 87]

2. Implementation Problem

Why is implementation studied? One way management decisions can be improved is through utilization of models and methods, and this requires new and useful applications of models and methods. Also, continuing research on implementation will enhance the understanding of organizational processes, theories of change, and behavioral implications for organizational persormance. [Ref. 8:pg. 4]

One way to study the implementation process is to examine what actually goes into the process. Figure 2.3 shows a sample of what may go into the implementation process. Initially, there is a problem which has been identified (the perception of the problem may or may not be correct), along with a desire for a solution. The solution is sought within the organizational goals and structure. Once the "input" and "agent" criteria has been specified or

determined, it is time for a model to be built to solve the correct problem. In the next step the solution to the problem is made available to the organization. If the solution is actually implemented, then one would expect to see changes in the behavior or decision making of the manager or organizational subunit [Ref. 8:pg. 5-6]. In the context of this example, implementation refers to the "actual use of Operations Research/Management Science (OR/MS) output that 'influences' their decision processes."

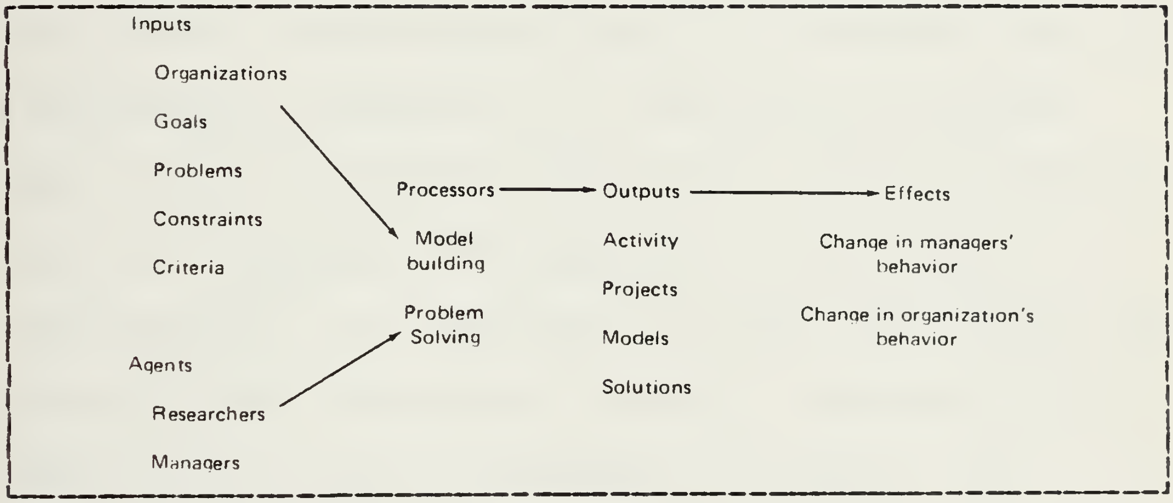
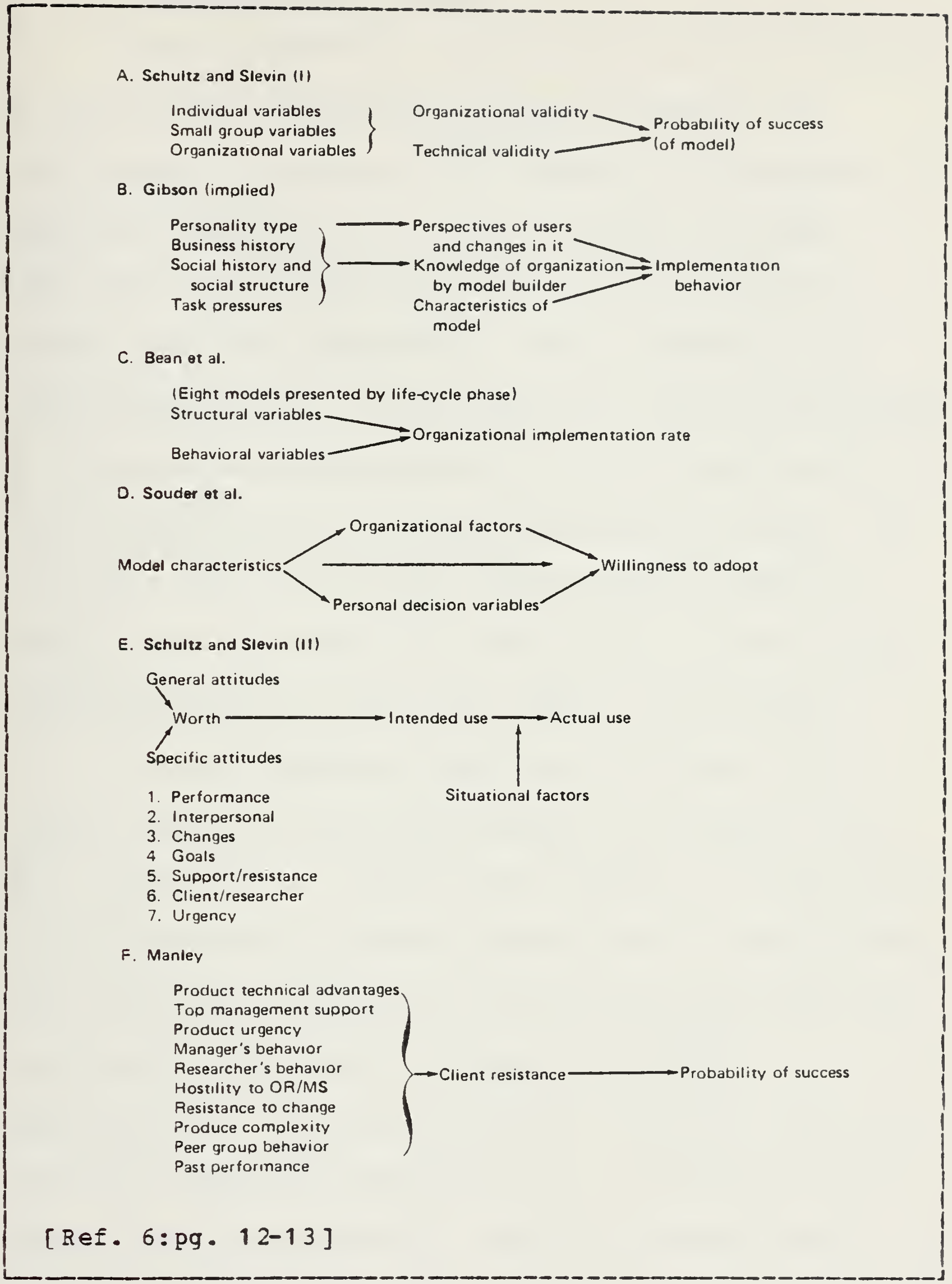


Figure 2.3 Ingredients of OR/MS Activity.

[Ref. 8:pg. 6] What do we now know? By using a process for identifying a problem and solution, managers can learn how the organization reacts.

3. Implementation Models

Implementation models are useful to show a relationship between the dynamic human and organizational elements. Implementation models also provides a means to test hypotheses about implementation behavior. Models can be used to synthesize what will happen with human and organizational relationships. A model, however, does not necessarily explain nor justify the entire implementation, possibly only a portion of it [Ref. 8:pg. 9]. Figure 2.5 shows a collection of implementation models, depicting the many possible combinations of factor and variables which are hypothesized as influencing the implementation process. Each of the implementation models have a general structure, involving a dependent variable, which is some measure of implementation, and independent variables, which explain the outcome of the implementation process. Implementation is a function of some set of independent variables. The independent variables differ from model to model but each set of variables attempts to capture the most significant influences of the implementation process. The analysis in Chapter IV attempts to utilize this view of implementation to show the degree of success with the implementation of or a change to a management control system.



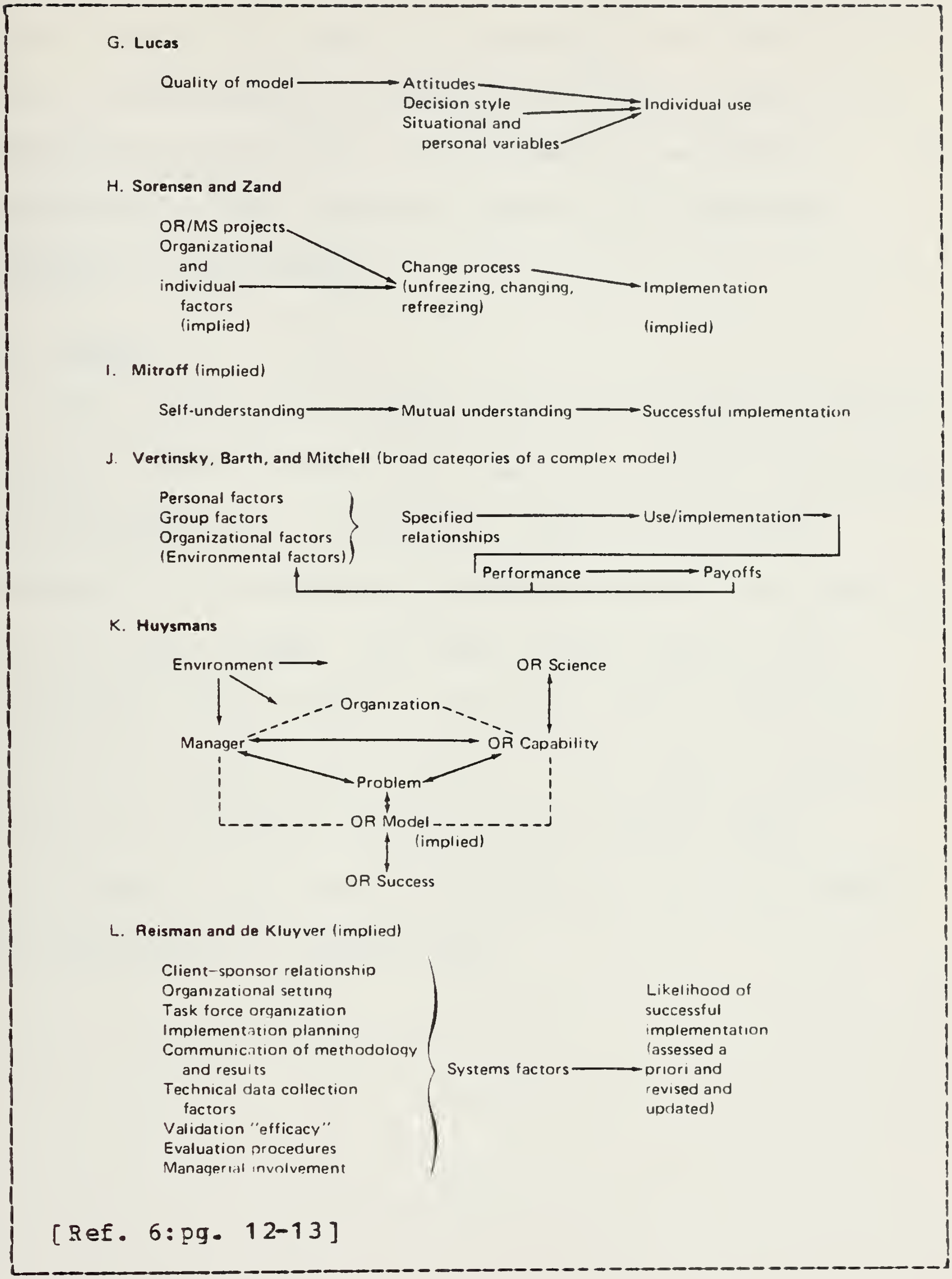
[Ref. 6:pg. 12-13]

Figure 2.4 Models of the Implementation Process.

4. Implementation Conflict

The implementation process can be greatly hampered by the attitude of affected personnel, leading to an unwillingness to cooperate and a refusal to participate in design and operation of a system. Ein-Dor and Segev [Ref. 9:pg. 153] discuss two major causes of conflict between users and implementors, "change resistance" and "power relocation." In the first case, they use the example of how an imposed system, with all of its uncertainties, could frighten people and cause resistance to change. In the second case, they suggest there could be affects on managers with the impact they have within an organization, and additionally, on the actual users of the systems.

Ein-Dor and Segev argue that resistance which becomes apparent during the implementation process stems from uncertainty and a fear of the unknown. Minimization of the problems can be achieved through better communications, which could allow employees to know their role within the organization, and instill a greater feeling of participation. The following points, while they may not guarantee successful implementation, are critical to the process [Ref. 9:pg.158-159]. They are ensuring better



[Ref. 6:pg. 12-13]

Figure 2.4 Continued.

communication, organizational committment to the system, formal controls and evaluation procedures are established, better understanding of organizational goals, better role definition between users and implementors, emphasis on cooperation between interested parties, and improved feedback on performance.

C. SUMMARY

This chapter has looked at both the management control process, conflict within the organization, and a description of implementation. An important aspect of the entire process are the behavioral considerations, and what must be done to affect change. The next chapter looks at two theoretical change models. One model will be used as a method for analyzing the success of the implementation or a change to a management control system within a Navy environment. The other model's function is to help explain the models used in the analysis.

III. MODELS OF CHANGE

Management scientists are constantly attempting to bring about change in an organization by applying models and techniques to the problems of the organizations. During a project, an influence relationship develops between the management scientist and the organization. The ultimate aim is to cause change in the organization. Unfortunately, in many cases the models are not implemented and little or no change occurs in the organization. [Ref. 10:pg. 217]

There is a natural tendency on the part of organizations to resist change. Individuals within organizations become adjusted to stable conditions and over a period of time performance of many tasks become routine and habitual. Individuals learn how to satisfy their needs within this stable environment. Change upsets this stability and is threatening. It introduces uncertainty in organizations and requires adjustment on the part of the organization members. This resistance to change is sometimes beneficial because it provides stability to an organization. When change is necessary, this resistance must be overcome. [Ref. 10:pg. 217]

Keen and Scott Morton [Ref. 11:pg. 190-192] argue that most management scientists are indifferent to the main concern of the decision maker which is "the use of the model rather than the model itself." While the management scientists are competing with peers trying to come up with the best model, managers just want something that works. The professional journals are full of "elegant" models but, again, managers want "results." Keen and Scott Morton state that

> "...while managers have no clear idea on how to implement information systems, two things are clear:
>
> 1) Implementation is their first concern.
>
> 2) The manager's reality is the one in which implementation takes place; the technology to be used must be adapted to that context and not imposed on it." [Ref. 11:pg. 192]

Implementation has thus far been described as a change process. In order to effect change, a systematic approach, using valid models is essential. Of the many models available to management scientists, two models, the Lewin-Schein and Kolb-Frohman models of change, have been proven successful and are discussed in this chapter.

While the two models have similarities, with regard to the description of individual steps, and what the steps accomplish, the Kolb-Frohman can be useful in helping to

more fully understand the Lewin-Schein model. The Lewin-Schein model is concerned with influencing the individuals of the organization, thereby causing change. The Kolb-Frohman model, while describing the change process in the organization, is more a model of consultation which facilitates the understanding of how to effectively influence the individual in the organization.

A. LEWIN-SCHEIN

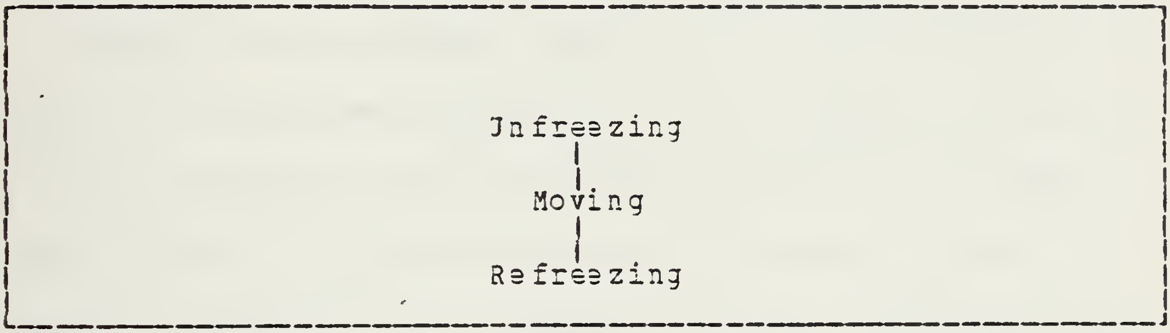


Figure 3.1 Lewin-Schein Model of Change.

The first model, the Lewin-Schein model of change, was developed in 1952 by K. Lewin and expanded in 1961 by E.H. Schein. Figure 3.1 depicts the three phases of the model: Unfreezing, Moving, and Refreezing.

The model steps are described as follows:

Unfreezing. An alteration on the forces acting on the individual such that his stable equilibrium is disturbed

sufficiently to motivate him and make him ready to change. This can be accomplished either by increasing the pressure to change or by reducing some of the threats or resistances to change.

Moving. The presentation of a direction of change and the actual process of learning new attitudes.

Refreezing. The integration of the changed attitudes into the rest of the personality and/or into ongoing significant emotional relationships. [Ref. 11:p 199]

During the unfreezing stage the external influences are felt-- "top management suport," "a felt need by a client," and "an immediate visible problem to work on." At this point, there is a disconfirmation of existing, stable behavior patterns; an atmosphere where one can safely try something new. [Ref. 13:pg. 58, 11:pg. 88]

A key behavioral problem can hinder the unfreezing step, the "resistance to change." This problem can be seen in an environment where the need for change is not perceived, an environment where everything is operating smoothly. It is normal for this resistance to occur where there is no obvious reason to change and is a critical phase for the implementors.

Once the Unfreezing begins, a change must occur, which leads to the Moving stage. How much change, however depends on how much of the external influences are felt by the affected group. Moving requires the presentation of information necessary for change and the learning of new attitudes and behaviors. [Ref. 13:pg. 58, 11:pg. 88] This process is difficult because of a pattern of relationships and interlocking expectations in the organization that tend to maintain the status quo. [Ref. 10:pg. 220]

During the refreezing stage the environment is again stablized, or put into equilibrium. The final equilibrium must be perceived as having a permanent place within the organization. This is possibly the most important stage since the change is stablized and there is reinforcement of new behavioral patterns. [Ref. 7:pg. 88.] Since implementation is an iterative process, change should not necessarily be stopped (permanently) at this point. [Ref. 13:pg. 59]

Ginzberg [Ref. 13:pg. 59-60, 7:pg. 88, 11:pg. 201] notes the results of a study published by D.E. Zand and L.E. Sorensen in 1975 of 250 management science projects. Their analysis indicated that when the Lewin-Schein model was

actively used, there was evidence of greater project success compared to a lack of the use of the model which related to more project failures. The Lewin-Schein theory of change appears to "fit the reality" of implementation. [Ref. 7:pg. 96] Based upon his analysis and the Zand and Sorensen results, Ginzberg postulates that one factor which may attribute to the failure of systems is that the consultant leaves before the system is actually successfully operational. This causes the Refreezing (the Termination step of the following Kolb-Frohman model) to be left unaccomplished [Ref. 11:pg. 94].

Ginzberg discusses two additional points made by Zand and Sorensen. Poor performance at one stage of the model led to poor performance at a later stage, and there was a strong association with the quality of activity at the Refreezing stage and the overall project success [Ref. 13:pg. 59].

B. KOLB-FROHMAN

This model focuses on issues which are related to the increasing of the effectiveness of the change process. One concern is the relationship between client and consultant. To whom in the client organization does the consultant

relate? Who influences whom? How open will the client and the consultant be with each other? What solutions are considered? These questions can be considered within the framework of a dynamic, seven-stage model of the planned change process. At the end of this section the seven stages will be compared to the three stages of the Lewin-Schein model. Figure 3.2 provides a description of the change process. Definitions of the model steps are as follows:

Scouting. This is the matching of the capabilities of the consultant with the need of the organization.

Entry. The problem situation is identified; plausible solutions to the problem are identified; criteria for evaluation is established; allocation of responsibilities and resources is made.

Diagnosis. Definition of client's perceived problem and goals for correcting the problem are focused on, as well as resources.

Planning. Operational objectives are defined; examination of ways to reach objectives are discussed; an action plan is developed.

Action. The "Best" alternative solution to problem is pursued; modification to action plan is made.

Evaluation. Evaluation is made of measurement variables to determine if objectives are being met.

Termination. The user takes over the system completely once correct output is obtained and training of user's is complete. [Ref. 11:pg. 201-205, 7:pg. 88, 12:pg. 54-61] These stages are by no means clear-cut in practice. They may occur sequentially or simultaneously. However, articulation of each stage provides a convenient way for the consultant to conceptualize and recognize the stages in his practice. [Ref. 12:pg. 52]

In Figure 3.2, the arrows connecting the stages illustrate the general developmental nature of the model. The first feedback loop, from planning to entry, defines the need for continuing renegotiation with the client in the light of diagnosis and planning activities. The second loop, from evaluation to planning, defines the need for using the evaluations of the previous actions to modify planning activities. [Ref. 12:pg. 54]

The most critical step in this process is the entry step (Scouting determines whether a client/consultant relationship is feasible). This step involves "ensuring legitimacy for action." Some key points in the process

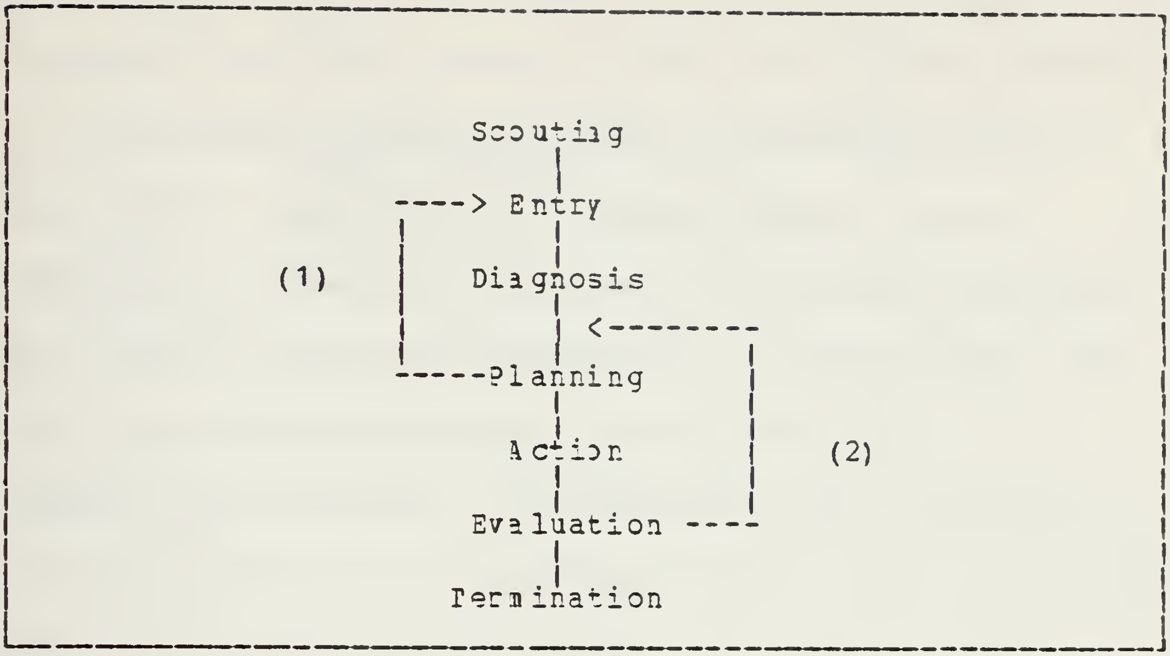
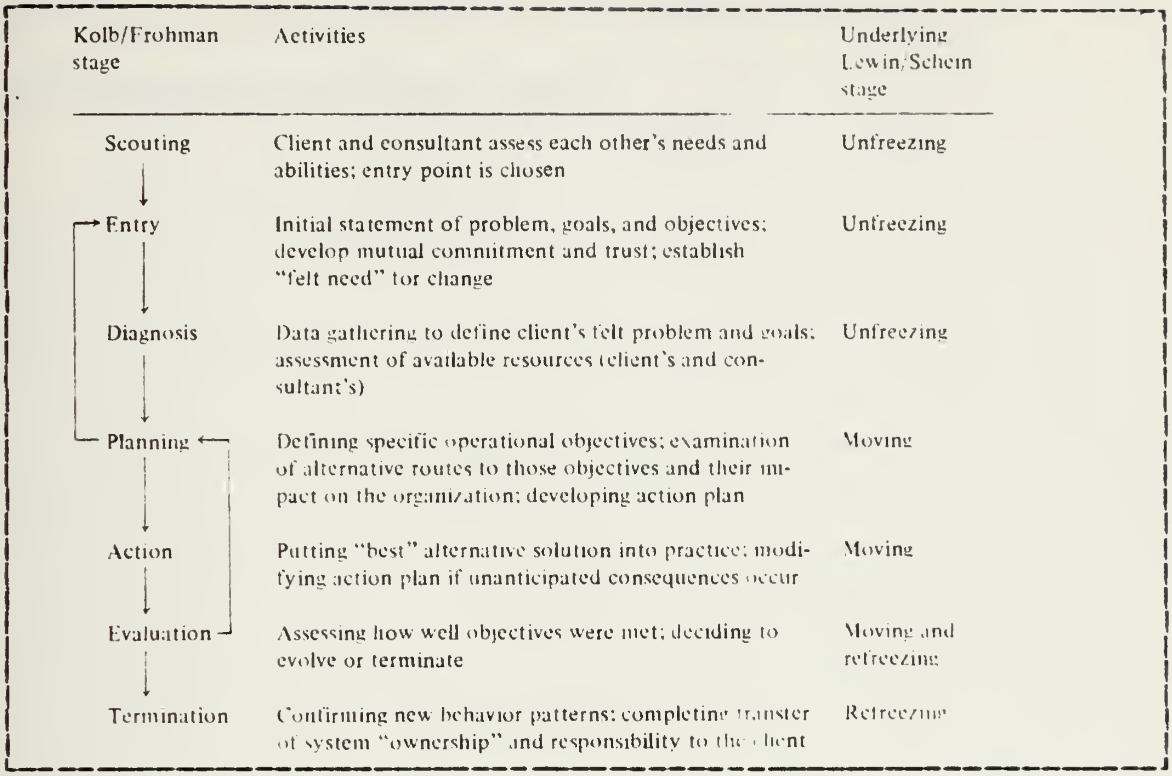


Figure 3.2 Kolb-Frohman Model of Change.

brought out by Keen and Scott Morton are: the identification of a felt need; the definition of goals in operational terms; a need for a contract for change; diagnosis and resolution of resistance to change, and initial allocation of resources and responsibilities [Ref. 11:pg. 203]. The entry step is also critical because this is the point where "success" should be defined. Hence, evaluation can be made based on whether earlier, firmly stated goals are being met, not only in design, but as the project is completed [Ref. 11:pg. 204]. Ginzberg [Ref. 13:pg. 59-60] did a study of approximently thirty projects in order to test this the

Kolb-Frohman model. One result of his study paralleled the findings of Zand and Sorensen in 1975, with their research of 250 management science projects. Successful projects more closely conformed to the change models, than did unsuccessful projects. The stage most strongly associated with overall success was Refreezing. A second result was there were differences in how projects fit the implementation process. The Unfreezing stage (concerned with behavioral and organizational aspects) had the greatest affect on organizationally complex problems.

A comparison of the two models and some general comments will conclude this section. Ginzberg [Ref. 7:pg. 88] provides in Figure 3.3 a comparison of the two models. The first three stages of the Kolb-Frohman model, Scouting, Entry, and Diagnosis are concerned with preparing the client for change, the Unfreezing stage in the Lewin-Schein model. Planning, Action, and some aspects of Evaluation parallel the Lewin-Schein Moving stage, the change itself, defining precisely what it will be and then putting it into action. The final phases, Evaluation and Termination, relate to the Refreezing process, the institutionalizing of the change within the client system, and integrating the new model or system into the user's established patterns of behavior.



Kolb/Frohman stage	Activities	Underlying Lewin/Schein stage
Scouting	Client and consultant assess each other's needs and abilities; entry point is chosen	Unfreezing
Entry	Initial statement of problem, goals, and objectives; develop mutual commitment and trust; establish "felt need" for change	Unfreezing
Diagnosis	Data gathering to define client's felt problem and goals; assessment of available resources (client's and consultant's)	Unfreezing
Planning	Defining specific operational objectives; examination of alternative routes to those objectives and their impact on the organization; developing action plan	Moving
Action	Putting "best" alternative solution into practice; modifying action plan if unanticipated consequences occur	Moving
Evaluation	Assessing how well objectives were met; deciding to evolve or terminate	Moving and refreezing
Termination	Confirming new behavior patterns; completing transfer of system "ownership" and responsibility to the client	Refreezing

Figure 3.3 Comparison of Two Models of Change.

C. SUMMARY

This chapter has looked at two models of change, and discussed the various steps of each model, as well as highlighted the steps which are the most critical in the implementation process. One of the models, the Lewin-Schein, will be used to assist in a determination as to whether the Navy does have sound implementation procedures in the case studies of Chapter V. The next chapter discussess the history of several management control

systems in use at the Naval Postgraduate School, as background for the case studies.

IV. HISTORY OF SELECTED NAVY MANAGEMENT CONTROL SYSTEMS

This chapter discusses the background of three changes which have been implemented within the Department of the Navy, affecting financial operations at the field level. The case studies of Chapter V examine the three changes as they affect the Comptroller Department, Naval Postgraduate School, Monterey, CA. The first change is the manner by which financial information is entered into the Navy accounting system. It involves a shift to the use of interactive computer terminals. The second involves the categorization of costs as either expense or investment within the context of Navy's appropriations. The final change concerns the promulgation of revised standard Navy financial documents.

A. BACKGROUND OF INTEGRATED DISBURSING AND ACCOUNTING FINANCIAL MANAGEMENT SYSTEM (IDAFMS)

For quite some time (about 40 years) the Navy has operated its financial systems on two simultaneous avenues--obligation control and reporting and disbursments for billing and expenditure reporting. These systems have

tended to provide conflicting information as they reported different expenditure values for the same periods and activity. This difference, called undistributed disbursements, has been a source of concern to Navy financial managers. As part of the Secretary of the Navy's Financial Management Improvement Plan (FMIP), the Navy initiated a program to improve the timeliness and accuracy of financial information obtainable through the accounting and disbursing system. Due to the processing methods, the requirement for hard copy documentation and reliance of the postal system for data transmission, the pre-IDA financial system was inadequate in providing timely and accurate accounting information. In addition, the need for memorandum records, duplicate files and multiple reconciliations resulted in the poor utilization of accounting resources. The Integration of Accounting and Disbursing (IDA) was designed to reduce/eliminate undisbursments and improve the accuracy and timeliness of financial information, while reducing the costs associated with the process. [Ref. 14:pg. 26] As the name implies, IDA will combine the functions of disbursing and accounting into a centralized unit which will be more responsive to the

requirements of management. IDA does not change the basic features of the system, only the method of reporting and processing of financial data and the roles of the parties involved. The changes to reporting and processing are to be accomplished through the use of automated data processing, advanced telecommunication techniques and a centralized, integrated database. [Ref. 14:pg. 25-27]

The basic objective of transaction processing under IDA is to integrate the accounting and disbursing functions into a single transaction database by using modern ADP and telecommunications technology. To accomplish this, a single set of documents will serve as the official accounting record. Successive entries, such as obligation or receipt data, are limited to only those elements required to update or expand the previously established records. [Ref. 15:pg. 41]

Customer activities of the Authorization Accounting Activity (AAA) (to be renamed as a Financial Information Processing Center (FIPC) under IDA) will be provided with remote terminal devices to permit entry, inquiry and retrieval of information in the database. The remote terminals will eliminate the need to perpetuate or

regenerate hard copy transactions and thus eliminate or reduce other duplicate files being maintained for accounting and disbursing purposes. A single set of document files will become the sole support for all financial transactions. [Ref. 15:pg. 41]

Integration of the database is to be achieved through the development of a new Navy Financial Information Processing System (FIPS). The FIPS will consist of a Central Accounting and Finance Office (CAFO), 16 Financial Information Processing Centers (FIPC) and 3 Financial Processing Centers (FPC). Utilizing the telecommunications network and automated data processing techniques, the FIPS computer system will enable the on-line activities to have and exchange information. One factor considered in the program design is that financial data in the system should be available within 24 hours. [Ref. 14:pg. 27]

Under the direct control of the Navy Accounting and Finance Center (NAFC), the CAFO will be responsible for the accounting discipline and control of the FIPCs. The CAFO will be organized as the central data base, maintaining the summary accounts used to provide the required information of higher authorities. [Ref. 14:pg. 27]

The case study of Chapter V examines the implementation of activity input via on-line interactive ADP equipment with the financial data base as it occured at the Naval Postgraduate School (Comptroller Department).

B. BACKGROUND OF THE CHANGE OF TO THE EXPENSE AND INVESTMENT CRITERION

Three types of costs are identified in the Five Year Defense Program. They are: expenses; investment costs; and research and development costs. The change in guidance on dollar limitations for expense and investment of Navy appropriations is described in this section.

The Navy requested (by a letter dated 30 Mar 1976) and was granted from the Office of the Secretary of Defense (OSD) approval to increase the threshold for investment of items of $1000 to items of $3000 and greater. Consequently the threshold (maximum) for expense items has been increased from $999.99 to $2999.99. Generally speaking expenses are considered to be the costs of items or services which are consumed in operating and maintaining the Department of the Navy. Expenses are financed by two basic appropriations, the Operation and Maintenance (O&M) and Military Personnel (MP) appropriations. Investments, on the other hand

represent the procurement of assets such as equipment. Investments are financed via the Procurement or Military Construction appropriations.

As discussed above, the cost of equipment (unless specifically excluded) which at the time of obligation are less than $3000, are considered to be expenses. As exerpted from the NAVCOMPT Manual, Vol. VII, expenses include:

1) labor of civilian and military personnel, including contractual labor;

2) rental payments on leases for equipment and facilities;

3) food, clothing and POL items;

4) expendable supplies and materials;

5) items designated for stock fund management in the central supply system;

6) maintenance, repair, overhaul, and rework of investment items, including real property facilities;

7) assemblies, spares and repair parts which are not designated for centralized management by an inventory control point in the central supply system;

8) general motion picture procurement and development;

9) all other equipment items not in the preceeding categories which have a unit value of less than $3000 and which are not designed for centralized individual item management by an inventory control point in the central supply system.

Investments are defined as costs of capital assets of the Department of Defense such as the real property and equipment that provide new or additional military capabilities or maintain existing capabilities. The following criteria, exerpted from the NAVCOMPT Manual Vol. VII, will be used to determine those costs to be classified as investments:

1) All items of equipment, including assemblies, spares and repair parts, which are subject to centralized individual item management and asset control by an inventory manager or an inventory control point in the central supply system.

2) Other items of equipment, except those listed under expense, having a unit value of $3000 or more.

3) Construction, including the cost of land and rights therein (other than leasehold).

4) The cost of labor, kits, assemblies, equipment and material for ship construction or conversion.

5) Any cost designated as expense under the Investment categories, when included in the production or construction of an investment item, except military personnel.

The following information was provided from Mr. Merit, of the Office of the Naval Comptroller (Code NCB-5/OP 925). During the decade of the 1970's, inflation caused the procurement of numerous items to slip from expense to investment categorization and financing because of the rigid $1000 threshhold. Numerous audit exceptions with regard to violations of Revised Statutes 3678 and 3679 have been reported as a consequence of non-adherence to the existing expense/investment criteria. Typically, the audit service found that a field activity would obligate O&M funds for a particular item, because they always had. With the cost of goods and services increasing, the $1000 expense threshold was exceeded, thereby causing the violations. Additionally, the dulling of the buying power of the $1000 threshold led to micromanagement of expenditures outside of the field activity. Further, the procurement appropriations were getting overloaded with requests for individual procurement

items. Buying with O&M resources (with its low level approval authority) is simpler.

As a result of the many problems with the unchanged threshold (since 1967), some Major Claimants contacted the Office of the Navy Comptroller (NAVCOMPT). NAVCOMPT queried the Major Claimants soliciting data on the impact that the current threshold was having on their operations, ascertaining the Major Claimant position was in favor of the increase to a higher level. The results of the questions were analyzed, and a request made to OSD for approval to increase the threshold from $1000 to $3000.

The request to OSD was approved and adjustments were made from procurement to expense appropriations in a Program Budget Decision (PBD) by OSD. A change was made to Volume VII of the NAVCOMPT Manual and an instruction was promulgated to field activities which carried the new guidance.

The case in Chapter V examines the implementation of the new expense/investment criterion at the local (field activity) level.

C. BACKGROUND ON THE IMPLEMENTATION OF SELECTED STANDARDIZED AND CONSOLIDATED FINANCIAL DOCUMENTS

In this section the implementation of new consolidated financial documents within the Department of the Navy is examined. The change involved the promulgation of three new NAVCOMPT forms and the cancellation of seven existing forms which were superceded due to the consolidation process. The three new forms are: The Order for Work and Services (NAVCOMPT Form 2275); The Request for Contractual Procurement (RCP) (NAVCOMPT Form 2276); and The Voucher for Disbursement and/or Collection (NAVCOMPT Form 2277). The forms which have been replaced/superceded are: NAVCOMPT Form 140 (Work Request); NAVCOMPT Form 252 (Navy Bill); NAVCOMPT Form 2038 (Request for Contractual Procurement; NAVCOMPT Form 2044 (Funded Reimbursable Work Estimate); NAVCOMPT Form 2053 (Project Order); NAVSUP Form 1153 (Contract Request); and NAVMC Form 349 (Marine Corps Procurement Request). In addition to the forms which have been superceded or cancelled, the Navy has requirements levied by external agencies to use the following forms: DD Form 448 (Military Interdepartmental Purchase Request (MIRP)); DD Form 448-2 (Acceptance of MIPR); DD Form 1131 (Cash Collection

Voucher); Standard Form 1034 (Public Voucher for Purchases and Services Other than Personal); Standard Form 1080 (Voucher for transfers Between Appropriations and/or Funds); Standard Form 1096 (Schedule of Voucher Deductions); and Standard Form 1097 (Voucher to Effect Correction of Errors). The Department of the Navy has requested that an 18-month exception to the present mandatory use of these forms be granted in order that the new forms be tested as substitutes.

The process of implementation of the new financial documents has transpired over five years. The change was the result of a Beneficial Suggestion by a Department of the Navy employee. A committee of Navy personnel reviewed the suggestion for standardization and consolidation of financial documents, and a proposal was sent to all Major Claimants from the Secretary of the Navy level. The concensus of opinion from the Major Claimants was that the forms had merit and should be adopted Navy-wide. The committee made the suggested changes and sent the proposed forms out again to the Major Claimants. A comprehensive discussion of the intended change was provided with each of the forms, and a request for final review and advice of

deficiencies with content or format that would prohibit their implementation in Fiscal Year 1982.

The new forms were designed and tested, the supply system stocked with the new forms, and an implementation date for general adoption was established (1 OCT 1981). Currently, with one year of use, there are no requests to revert back to the superceded or cancelled forms.

D. SUMMARY

In this chapter, three changes within the Department of the Navy have been described. In the next chapter three case studies on how the changes were implemented at the Naval Postgraduate School are presented.

V. CASE STUDIES OF SELECTED NAVY MANAGEMENT CONTROL SYSTEMS

This chapter examines the implementation process through the use of three case studies. The following method was used to obtain the information presented in this chapter to validate the Navy's implementation procedures. First, a questionaire was formulated (Appendix B). The questions were designed to establish whether or not key points of the Lewin-Schein model is addressed in an implementation process. Two interviews were conducted, one with the two senior military personnel, and the other with the senior civilian, in the Comptroller Department at the Naval Postgraduate School. The interviews were conducted independently, first the military personnel, and then the civilian. No reference was made, during the interview of the civilian, to the responses of the military personnel. During the interviews, the same questions were asked, in the same order, on the same three changes which are discussed in Chapter IV.

The material in the following sections is the author's summary of the responses to the questions asked during the interviews. In cases where concurrence is noted with the

civilian's response to the questions, it is done for purposes of conciseness of presentation. As stated above, the civilian had not been informed of the response the military had to the questions asked.

The questions were asked to establish whether the field activity was aware of changes to existing procedures. There was not an attempt to establish specifically who communicated with the activity, but simply whether or not there was communication prior, during, or after the implementation of a change.

The first three sections of this chapter discuss the three specific changes while the last section is an analysis of the two models presented in Chapter III.

A. IMPLEMENTATION OF INTERACTIVE COMPUTER TERMINALS

In this section, the implementation of interactive computer terminals for input, update, and maintenance of financial records is examined. The implementation date for IDA was 19 July 1982 at the Naval Postgraduate School. Prior to this date, all input of data was through the Naval Supply Center (NSC) Oakland. The process was accomplished in a batch mode using a contracted keypunch service with hard copies of reports following via the postal service.

1. Comments by Senior Military

As observed by the two senior military in the Naval Postgraduate School Comptroller Department, there was a need for an improvement to the geographically removed batch input of financial data. There was a need for local control of the operations for various reasons. Reasons considered important included the need for checking the accuracy of input; timeliness of operations; and a vested interested in the entire accounting operation.

The transition from manual bookkeeping procedures to real time ADP assisted operations was planned over several years. The local activity was made aware of the impending changes, and was able to prepare for the change 6-8 months in advance of the actual implementation date. The change was welcomed and supported by the military; and by the civilian personnel in the Comptroller Department who were more flexible, adaptable, and receptive to change.

The senior military knew why the change was occuring, but the training program for the impending change had deficiencies. The perception of the military was that the training was superficial and insufficient. The trainers needed to be better trained (i.e. be able to answer a

greater number of questions on the use of the new system). The more flexible and adaptable personnel got the most out of the training. Some suggested reasons for the less adaptable personnel having trouble with the training was the class size, unfamiliar environment (Oakland versus Monterey), and too much material to cover in too little time.

The senior military said the change is permanent. They also stated that there has not been a post-implementation review to establish problems with the change to the interactive computer mode of data input from outside sources. They have conducted some internal review of the implementation locally. Additionally, there has been some additional training locally, at the request of the local activity.

2. Comments by Senior Civilian

The interview of the senior civilian in the Comptroller Department indicates many of her responses to the questions are the same as those made by the military. However, there was some further qualification with regard to some of the questions. With regard to the notification of the upcoming change, it was known that the change to

interactive computer terminals was impending approximently five years prior to the planned implementation date. As a result of a variety of delays, the actual date was July 1982. The reaction of subordinate civilian personnel was generally favorable, but there was grumbling because of the change from an established system which they were comfortable with. There was a need for extensive training. There was concurrence that the training could be improved, specifically by having the training done locally. The only area where there was a significant difference in response was with regard to post-implementation review and feedback. The senior civilian indicates someone did come to the Comptroller Department from NSC Oakland for a half-day review session; and there is the ability for the computer operators to call NSC Oakland as required when problems do occur.

B. CHANGE IN EXPENSE AND INVESTMENT CRITERIA

In this section, the change in the expense and investment criteria as it affects the Naval Postgraduate School is examined. The effective date of the pertinent instruction, SECNAVINST 7040.65, is 2 Jan 1980. This is the official promulgation of the change to naval activities.

There was a corresponding change to the NAVCOMPT Manual, Volume VII.

1. Comments by Senior Military

As observed by the local comptroller, there was a need for a change in the threshold for expense and investment costs. The princial reason was the rising costs of items normally obtained using O&M funds. The field activity became aware of the change upon promulgation of the pertinent instruction, near or after the proposed change date. The change was affected by promulgation of an instruction and a change to the NAVCOMPT Manual.

The transition to the higher dollar threshold was not observed to be met by resistance by the local activity, and in fact, was a welcome change. The personnel who worked with the associated paperwork were indifferent to the change; it did not require any additional resources.

There was not much background provided to the activity with regard to the change, only that one was coming. No special training was required, only emphasis that a change had occured.

The senior military felt the change is permanent. There had not been a post-change review to evaluate whether

the change had any affect on the activity, nor was there any feedback solicited from the activity with regard to any impact the change had on the activity.

2. Comments by Senior Civilian

The comments from the senior civilian generally corresponded with those made by the senior military. The senior civilian indicated that the notification of the upcoming change was perceived as becoming a reality through the FY81 budget call and other associated budget guidance from the Major Claimant. She also maintained that there was no notable problems caused at the local level as a result of the change and that the new higher limits are permanent in nature.

C. IMPLEMENTATION OF CERTAIN STANDARDIZED AND CONSOLIDATED FINANCIAL DOCUMENTS

In this section, the change to new consolidated and standardized documents is examined. Three new forms were promulgated, NAVCOMPT Forms 2275, 2276, and 2277 to replace seven superceded or cancelled forms. The effective date of the instruction promulgating the new forms was 13 July 1981. At that time, there was to be an adequate stock of new forms available for ordering by the local activity.

1. Comments by Senior Military

The perception of the senior military in the Comptroller Department was that there was a problem that need correcting, primarily through the implementation of the new Form 2277 (The Voucher for Disbursement and/or Collection). There was no mention of either of the other forms which became effective at the same time. They also noted that the change really made no difference to them; the primary users are the disbursing personnel.

The reaction of the subordinate civilian personnel was that of indifference; they had to use some kind of form to do their work. The accounting data remained the same, although the forms were multipurpose.

There was no requirement for any additional resources (except perhaps the stocking of the new forms) and no specific training was required other than the use of visual aides with regard to the format of the new forms. There was no post-implementation review nor feedback solicited from the local activity.

2. Comments by Senior Civilian

As a contrast to the comments by the senior military, the perception of the senior civilian in the

Comptroller Department was that there was neither a problem which needed resolution nor a reason for a change. She indicates that as a result of the change to the new forms, there was confusion on the use of the form by the subordinate personnel. She contends that there was not an adequate explanation as to how to use and interpret the new forms. The one item which caused notable confusion was with the requirement to transfer code numbers from the back to the front of the form. She further contended that the training aides provided to assist in the changeover were full of errors.

The senior civilian concurred with the senior military comments that there was no post-implementation review nor any feedback was solicited from the local activity.

D. ANALYSIS OF RESULTS AND COMPARISON TO MODEL OF CHANGE

The previous sections of this chapter have described the results of the questions on change referred to in Appendix B. In this section, the response to the questions are analyzed using the Lewin-Schein model of change.

As depicted in the Lewin-Schein model in Chapter III, the three key steps to change on the organization are

Unfreezing, Moving, and Refreezing. Although the Kolb-Frohman model is not specifically used in this analysis, it has provided a basis for comparison to the Lewin-Schein model (refer to Figure 3.3 of Chapter III).

1. Unfreezing

a. Comparison

The first six questions of Appendix B attempt to capture some key points of the Unfreezing step for validation of the change process as it occured at the Naval Postgraduate School. Six points selected from the theory of change in Chapter III. Was there a visible problem? Was there a felt need for a change? Was the problem identified? Once the solution to the problem is identifed, is an action plan formulated? Was there any resistance to change? Was there any allocation of resources to assist with the change? The six were selected because these questions can generally be answered with a Yes/No type of response.

b. Analysis

Based on the response to the questions presented, it would appear that Unfreezing was attempted. But at what level? The interviews indicate that there was obvious Unfreezing at the SECNAV/NAVCOMPT/CNO/Major Claimant

level. There was a visible problem to be solved, in all three cases. In the case of the change in expense and investment criteria, the Major Claimants approached NAVCOMPT with a request for an adjustment to the threshold dollar level. In the case of the change of selected standard financial documents, the problem was identified by someone in the Department of the Navy via a Beneficial Suggestion. These examples also indicate that there was a "felt need" for the change. However, in the case of the change in NAVCOMPT forms, the military recognized the need for the change while the civilian did not. The reason for the civilian not recognizing the need for the change could be a lack of advance notice of the impending change, thus incomplete unfreezing. In these cases, there was an iterative process to obtain a solution, by a sometimes lengthy review process between NAVCOMPT and the Major Claimant. In the case of the implementation of interactive computer terminals with IDA, there were several contracts let to private firms to help design the system and establish key milestones for the implementation/installation of hardware and software. The change in financial documents required feedback on initial concept from the Major

Claimant; the change in expense and investment criteria required a reprogramming of appropriations at the Secretariat level. Through these steps, resistance to change could be identified and resolved. Finally, if any additional resources were required (as with IDA and the need for ADP equipment and personnel for training the field activities in the use of the new software/hardware), it must be included for in a budget. At the local activity level, however, it appears that they are on the receiving end of direction, with little or no initial interaction during the assessment of the problem or formulation of goals and objectives.

2. Moving

a. Comparison

Some key points of the Moving stage as discussed in Chapter III are the presentation of information to enhance the visualization of the new concept; and appropriate training to ensure a smooth transition. These are emphasized in questions 7-8 (and possibly no. 11) in Appendix B.

b. Analysis

It appears that in all cases, some form of advance warning was sent to the local activity to prepare them for the upcoming change although the timing of the notification is not known. Specifically, in the case of the interactive computer terminals implemented in the Comptroller Department, there was training at NSC Oakland, prior to the implementation date. In the other two cases, the upcoming change became known as a result of a budget call or the notification that new forms would be stocked in the supply system. At the Major Claimant level, it would appear that this step has less impact than at the local level, since at the local level the changes affect daily operations on the micro level, while the Major Claimant, with their monitoring and policy promulgation function, are affected on the macro level. One other point which could be considered as important to the Moving step is that of question 11 of Appendix B, concerned with feedback. Feedback is important, not only after the implementation is complete, but in the earlier stages to ensure objectives are met, and to uncover and rectify any inforseen problems as they occur. It is not obvious from the interview that this

occurs in any of the cases, with the exception of the timing for training on the interactive computer terminals. The timing of the training is mentioned because it occured prior to the the implementation of the interactive computer terminals, and the trainers had immediate feedback on problems the operators were having with all aspects of the operation of the computer terminals.

3. Refreezing

a. Comparison

The central concept of the Refreezing step is whether the change it is perceived as being permanent. This is addressed in two questions in Appendix B, nos. 9 and 10 (and to some extent no. 11). This step can be emphasized by a post-implementation review reinforcing the critical nature of the change and the need to continue make it work.

b. Analysis

It does not appear that there was an emphasis placed on evaluating the implementation process as it occured at the field activity. At the Major Claimant level, there was feedback (related to question no. 11 of Appendix B), but it was primarily in the early stages of design and review as opposed to some time after the change was completed.

E. SUMMARY

In this chapter, there were three case studies of changes in Navy management control systems, with a comparison to a theoretical model of change presented in Chapter III. It appears that the changes which occured did correspond to key points in the Lewin-Schein change model. There was, however, a lack of emphasis in some key areas. The sample may have some affect on the results, that is, one field activity with only two sets of interviews to validate the actual implementation of change with the theoretical model. The next chapter provides a summary of this thesis, conclusions to the questions posed in the introduction, and recommendations for future consideration.

VI. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

A. SUMMARY

The purpose of this thesis is to determine whether the Navy has theorectically sound procedures for implementing change in management control systems; and to determine, if the implementation process was used, how was it used.

Chapter II provides a discussion on management control and implementation. The management control section discusses accounting systems, the formal management control system, and design and implementation considerations. The implementation section defines implementation, reviews general problems of implementation, describes selected implementation models, and concludes with a review of methods to avoid conflict during the implementation process.

Chapter III examined two models of change, the Lewin-Schein and the Kolb-Frohman. Critical steps of each model were highlighted, steps which affect the implementation process. The concluding portion of the chapter compared and discussed the two models.

Chapter IV examined the background of three changes within the Department of the Navy which have affected

financial operations at the field level. The three changes are: the implementation of interactive computer terminals within the Comptroller Department for input, update, and maintenance of financial records; the change in threshold levels for distinguishing between expense and investment expenditures; and the cancellation and promulgation of new consolidated and standardized financial documents.

Chapter V was used to examine the three changes discussed in Chapter IV by comparing the theoretical implementation procedures to what actually occured at the field activity.

The generalizability of results of this study are limited, given that the data was gathered at only one activity. However, inasmuch as the activity is representative of other Naval activities, the reader may extend the results of this study.

B. CONCLUSIONS

Two major conclusions are warranted. They answer the two questions presented as the Research Questions this thesis attempts to answer.

1) Does the Navy have a theoretically sound process for implementing change in its management control systems? It

would appear that the Navy does have a sound process for implementing change, at the SECNAV-NAVCOMPT-CNO-Major Claimant level. The background of each of the cases indicates that the key points of Chapter III are addressed at this level. There was in each case a visible problem identified which needs to be resolved; there was a felt need for change. There is an analysis of the problem and an iterative process with feedback to formulate a solution to the problem and a subsequent plan of action for implementation of change. Where required, there is a determination made and an allocation of resources to facilitate the change process. At the activity level, however, there is little interaction, generally just direction provided and in one instance the need for change was not recognized. There is training provided where required. It is not always perceived as being adequate, but there is a concerted effort made to ensure that it is available.

2) Is the implementation process used? The implementation process is used. How? By ensuring that there is Unfreezing, Moving, and Refreezing. Where? It would appear that the Unfreezing stage primarily affects the

Major Claimant, while the Moving and Rereezing stages primarily affect the local activity. The Unfreezing primarily affects the Major Claimant because of its role with setting policy and promulgating change, while the Moving and Refreezing affects the local activity activity primarily with the need for advanced training prior to implementation and feedback to evaluate problems encountered during the implementation or change process.

C. RECOMMENDATIONS

Based on data gathered for this study, subject to the limitations discussed above, the Navy does appear to use sound implementation procedures. It would seem appropriate to emphasize the areas that are deficient. The following recommendations are provided:

1) A primary concern of the local activities is the lack of training or preparation for the new change. To help assure that the local activity is more adequately prepared for a change, a more intensified training or notification program could be investigated.

2) An improved feedback or post-implementation evaluation program. This could ensure implementation problems are identified for evaluation, and serve as a guide to the

actual status of the implementation process. The identification could be done on a random basis with a set of relevant questions which are statistically analyzed.

3) Publish current changes and the status of their implementation on a periodic basis. Through the use of the Financial Management Newsletter (NAVSO P-3568), there could be a periodic review of the current changes in the Navy financial management system, with the status, and a review of problems which have occured during the implementation process.

Based on the research of this thesis, the Navy does have an implementation procedure, at both the policy and field levels. Although the sample size was limited, it is evident that change does occur in an orderly manner. The emphasis is different at the two levels. The policy level is more design and formulation oriented whereas the field level is more concerned with the actual day-to-day operations. Without sound implementation procedures, and some understanding of change, there would no doubt be some form of mass confusion.

APPENDIX A

ACCOUNTING OVERVIEW

The material in this appendix is exerpted from a Master's Thesis by Cooper and Littleton, Integrated Disbursing and Accounting (IDA), Its Development and Implementation.

Accounting can be described as the art of recording, classifying, and summarizing in a significant manner and in terms of money, transactions and events which are, in part at least, of a financial character, and interpreting the results thereof. [Ref. 15: p. 11]

Although this short definition highlights the essence of accounting procedures, it fails to point out why accounting is done and for whom. The essence of these two points is that accounting must not be viewed as an end in itself, but rather as a tool for accomplishing organizational objectives. Therefore, accounting is a service activity whose function is to provide quantitative information, primarily financial in nature, about specific economic entities, which is intended to be useful in making economic

decisions. Accounting is a means of communicating this quantitative information to those who have an interest in interpreting and applying this information. In the private sector these users vary from management or owners to investors and regulatory agencies. Their needs and expectations determine the type of information required of the accounting system. Accounting provides the information that can be useful in evaluating management effectiveness in fulfilling its stewardship role and other managerial responsibilities. [Ref. 15:p. 11-12]

Financial statements are the means by which information accumulated and processed is periodically communicated to the users of the information. Therefore, they have to be designed to serve the needs of a variety of users, particularly owners and creditors. [Ref. 15:p. 12]

A. GOVERNMENT ACCOUNTING

In the public sector, the various users are not concerned with a profit or loss in a business sense. However, they are extremely concerned with ensuring that maximum benefit is received for every dollar spent and that suitable control is maintained over expenditures. Where the private sector attempts to maximize profits, the public

sector attempts to maximize benefits received for a given level of expenditures. Even though the focus or objectives are different, accounting still plays a significant role in reporting on the results of operations and ensuring that various laws and directives are complied with properly. Accounting is also concerned with providing information that is accurate and timely. [Ref. 15:p. 12-13]

Accounting in the Federal Government is designed to provide financial information for a variety of users, such as the management of a particular agency, the Department of the Treasury, the Office of Management and Budget, the United States Congress and the American public. This financial information is used to facilitate efficient management; support budget requests; show the extent of compliance with legal provisions; report (in financial terms) to other agencies, the status and results of the agency's activities. [Ref. 15:p. 13]

B. NAVY ACCOUNTING

The basis of the Navy's present accounting system can be traced to the Budget and Accounting Act of 1921. This legislation established the General Accounting Office (GAO) headed by the Comptroller General of the United States. The

Comptroller General was given the responsibility for developing governmental accounting systems. He was also given the authority to make expenditure analysis; maintain ledger accounts; investigate receipts, disbursement, and application of public funds; examine books, documents, papers and records of financial transactions; and perform audits as necessary. The Navy accounting system is open to GAO review and has continually received the Comptroller General's approval during such examinations. With the exception of some accounting procedures utilized for the operating forces and the general extent of automation within the system, the Navy accounting system is very similar to those of the other armed services. [Ref. 15:p. 13-14]

Accounting has three major purposes in the Navy. They are as follows:

1. To report the use of funds under the various appropriations granted to the Navy by Congress.
2. To control the obligations and expenditures of funds and thus to prevent their exceeding the limitations imposed by Congress.
3. To provide analysis of the costs of maintenance and operations, construction, and procurement. [Ref. 15:p. 14]

In addition, established Navy accounting procedures have the following specific goals:

*To maintain consistency between fund administration and budgeting processes;

*To provide timely accounting information for management review and to meet the requirements of statutes;

*To maintain adequate accounting controls of total resources, distinguishing between funded and unfunded availability;

*To provide adequate controls over commitments and obligations both incurred and outstanding;

*To provide control of realized receivables at allotment level, with proper integration with bureau/office system command control ledgers; and

*To provide for commitment accounting at all levels of funding. [Ref. 15:p. 14-15]

The basic organizational entity in the Navy's accounting system is the Authorization Accounting Activity (AAA). These organizations are designed to centrally perform the accounting functions for other activities. By centralizing these functions, the Navy hoped to achieve a more efficient use of resources and a more rapid collection of financial

data. It relieved the operational units of excessive involvement in complex functions which would have otherwise been a tremendous administrative burden if done locally. When an activity is designated an AAA, it is officially responsible for providing:

1. Appropriation Accounting
2. Inventory Accounting
3. Plant Property Accounting
4. Cost Accounting
5. Payroll Accounting [Ref. 15:p. 15]

Other functions can be assigned at the discretion of the Comptroller of the Navy (NAVCOMPT) depending upon the size and processing capabilities of the AAA. Typically, however, the services provided by an AAA are static in nature from one period to another. That is, the data to be collected and the format in which that data will be displayed are, to a large extent, prescribed by NAVCOMPT. An inherent responsibility of the AAA is to provide guidance to customer activities in order to assure more timely and effective management of resources. [Ref. 15:p. 15-16]

APPENDIX B

Questions for Validation of Implementation Process

(U) 1. Was there a visible problem or situation needing improvement?

(U) 2. Did this field activity have a need for the change?

(U) 3. When was this field activity informed of the upcoming change?

Was it before or after the implementation date?

(U) 4. How did the change take place?

(U) 5. Was there a resistance to the change by this field activity? What? Why?

How did the low echelon personnel react to the change (i.e. personnel subordinate to senior cognizant military and civilian)?

(U) 6. Was there a need for additional resources? ($'s, personnel)

Were resources allocated?

(M) 7. Was information provided to ensure this field activity knew why the change was occuring?

If information was provided, did it help the change occur?

(M) 8. Was training provided to this field activity to ensure efficient and effective implementation of the change?

(R) 9. Were the changes perceived as being permanent?

(R) 10. Was there a post-implementation evaluation of the change?

(M) 11. Was feedback solicited from this field activity?

If yes, what was the nature of the feedback requested?

When was the feedback solicited?

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